Event Guideline F: Relay Events

This Guideline is only intended to provide advice to Organisers and Planners. No compulsion is intended, and it is accepted that the particular circumstances of an event may make it sensible not to take up all of the suggestions made.

1 General Information

Levels: This generic guideline applies to Relay events, Relay events may be planned at any level of competition.

Purpose: To provide fair and exciting relay competition for orienteers of all abilities except the very young / inexperienced.

Characteristics of Relay orienteering:

Typically Relay orienteering takes place in non-urban and mainly forested areas. Open areas may be used but should be of suitable complexity such that they allow runners to lose contact with others. Terrain with continuous good long distance visibility does not allow competitors to pass each other during the race and turns the competition from a navigational challenge into a physical one.

Fair competition is essential to Relay events and the Planner must ensure that all teams face the same overall challenge. Consequently, whilst individual laps may be gaffled i.e. different maps for different teams, teams in the same class must complete the same overall course. In order to reduce the element of luck it is particularly important that last lap runners have the same or very similar last part of the lap.

Nature of event: Cross-country events, usually held in daylight. Teams generally consist of three competitors, in which runners hand over from one to another on completion of their lap. First lap runners on a particular class start at the same time in a mass start.

Competition: Individual lap times may be recorded, however the result of the competition is based on the finishing order of the last lap runner of teams as they cross the finishing line.

Event organisers may choose to start second or further lap runners before their previous lap runner has returned in “mini-mass starts”. Such runners, and the teams that they are members of, will typically continue to remain competitive, overall times being the total of the individual lap times. The timing of these additional starts will depend on the nature of the competition and any safety issues, such as weather conditions or terrain. It is important they should not detract from the overall nature of the event by making it impossible to identify leading teams finishing due to early “mini-mass” starts.

Officials: Officials should be appropriate to the level of the event, see Rules 4.1 to 4.4 and Appendix C parts 1.2.1, 1.3.1 and 1.4.1. The Organiser, Controller and Planner should have experience of at least competing in Relay events.

Responsibility: The organising body shall take financial responsibility unless prior agreement has been reached with British Orienteering (Rule 2.3.1).

2 Map and Terrain

Quality of Terrain:

The terrain should be appropriate for the level of event and competition, taking into account the requirements given in the section "Characteristics of Relay orienteering". It should offer some route choice possibilities, preferably with reasonably complex terrain. There should be sufficient types of control sites in the area to allow different sites to be selected for different courses.

Map: Maps should be produced to the International Specification for Orienteering Maps (currently dated 2000). See also Appendix H. Map scales are usually 1:10,000 for Relay events.

3 Course Planning

General considerations:

Sufficient different laps should be planned so that teams are not all running the same course at the same time, in other words such that runners will need to navigate successfully in order to complete their course. The likely numbers of teams in any one class will indicate how much the Planner will need to gaffle laps and how many courses need to be planned for each class. Gaffling may range from minimal (where only two or three different courses are needed for a 3 person relay) to complex (where courses may split at one or more common controls and 9 or more different maps may be used to cover different combinations). In most cases laps need to be very similar in overall length and physical difficulty and must be of the same technical difficulty. Some classes at events such as the JK or Harvester, will have laps of differing length and/or technical difficulty, and the Planner will need to consult the relevant Competition Rule.

Changeover and assembly area:

The location and design of the changeover area is crucial to a successful Relay event. It should be adjacent to or within the competition area in order to reduce dead running at the start and end of laps. It is preferable to design the changeover such that waiting runners are able to see their incoming runner in sufficient time to get to the handover point. The spectator element is very important to a good Relay event, so there should be enough space to also allow spectators to see incoming runners, preferably from the last control onwards. Larger events such as JK or British Championships should provide additional spectator "value" either by including spectator control(s) or radio control links into a commentary system. Commentators need to be able to see incoming runners and

therefore the siting of the commentary team needs careful consideration. It is also important that any cabling from spectator or final controls can be routed safely into the commentary position. It is difficult (but not impossible) to provide the above in a totally flat field and locations where a broad re-entrant, or concave slope are present will often provide the best assembly areas. A convex slope will significantly restrict line of sight for all concerned and is best avoided. Mass starts inevitably lead to packs of runners exiting the assembly area at one time, so very narrow or steep downhill legs to the first controls are likely to be dangerous. Sufficient distance should be given for the mass start to spread out before runners meet a potential obstruction or hazard.

All of these considerations need close collaboration between the Planner and Organiser, with approval by the Controller, before detailed course planning can be started. It is therefore important that the location is agreed very early on in the planning process, preferably with a site visit of all of the relevant parties.

The actual handover area also needs careful planning. If at all possible waiting pen(s) for runners should be placed so that waiting runners can identify their incoming team-mate. They also need to allow everyone in the pen to see, not just the tall runners at the front of the group, so a gentle downhill slope is ideal. Consider having a separate area in front of the pen for shorter (younger) runners. Incoming and out-going runners need to be able to touch and then exit the handover line safely, so incoming runners must approach at an acute angle to the line, not head-on and similarly for out-going runners. Marshalls will be required to keep the line clear and also to help those incoming runners whose team-mate does not appear when expected.

3.1 Laps:

Courses should be planned such that competitors cannot easily follow fellow competitors in the same class. Assuming 3 person teams, for small events it may be sufficient to plan three courses A, B and C and to randomize the allocation of laps to teams. This gives 6 possible permutations for team / lap allocations: ABC, ACB, BAC, BCA, CAB and CBA

For larger events it is better to divide individual courses into two or more sections. The simplest option is to have 3 first parts A, B and C, a common middle control and 3 second parts a, b and c. The combinations can be Aa, Ba, Ca, Ab etc. Any one team must complete overall laps containing one part A, one part B etc. This ensures that all teams complete the same overall course during the event. It also separates the groups of runners doing (for example) part A as after the common control only one third of the group will carry onto the same second part. This option gives rise to 9 maps with 36 permutations, for example one team may run Ab, Ba and Cc, another Ac, Bb and Ca. This is generally more than sufficient to separate teams during the competition and it is rare that more complex gaffling of courses is necessary. It is a good idea to select the common control with care such that it is not immediately obvious to

competitors that the courses divide following that point. So a control at a compulsory crossing point would not be an optimum common control.

Fairness: Fairness between laps is crucial to good Relay course planning. Planners often create lap variations by grouping control sites, however it is not good planning to have groups of controls visible from each other as this tends to reduce navigational challenge, leading to a "hunt the right number" approach. Conversely if three different first controls are in radically different directions from the start then runners can immediately identify the sub-group that they are competing against for the first part of their lap. Early on in courses runners are often best separated by having different leg lengths but in the same general direction from the start. Head to head racing is an important element in Relay Events and, in particular, individual laps should have similar challenges in the later part of the course. Consequently it is not good practice to have significant differences in leg lengths or physical / technical difficulty between controls in the very late stages of any lap. If control site options are limited towards the end of courses, it is acceptable to have one or more common controls to all laps.

3.2 Control sites

Fairness: As for all orienteering competition, control sites must be fair in all aspects. In Relay events competitive pressure, especially following mass starts, can mean that runners may make assumptions regarding "their" control sites. Sites must therefore be unambiguous and any possibility of confusion with other similar sites (whether on the map, description or on the ground) should be avoided at all costs. Careful consideration of control locations, descriptions and codes should be made.

Loading: Mass starts lead to packs of runners in the early stages of any competition. The flow of runners through a particular site should be assessed as well as the overall numbers visiting the site. Higher than expected numbers of runners passing through a control at any one time can result from multiple courses using the same site. Examples would be a site which is the second or third control on a course being used by a later starting course as a first control, or a common control, especially if after a "collecting feature" such as a crossing point. Adequate punch units will be needed for the maximum expected flow and the actual location of these also needs careful placement such that all can be used simultaneously. The actual control location for a heavily used site should also be considered. A steep slope or restricted access (such as between boulders) is not suitable for high competitor flow.

4. The Competition

Car parking and other facilities:

As Relay events are team competitions with mass starts competitors tend to all arrive at the same time. The management of car parking needs to take this into account and it is advisable to be able to split up parking streams to enable cars to be parked rapidly. Also, mass starts tends to mean that competitors all want access to facilities such as toilets at the same time. So it is a good idea to provide a higher number of toilets than would be normal for the overall event size. A good rule of thumb would be that in a multiday event, there will be approximately two thirds of the Individual entries for a Relay, but you would need the same number of toilets.

Team declaration:

Teams are generally entered in advance, on a club basis, and the organising body must be able to collect and process team declarations, both in advance and on the day, as well as last minute changes to team members. They also need to be able to confirm eligibility of teams to comply with any relevant entry requirements (such a membership of the same club). Where a class has mixed difficulty / length laps, information on which lap runs what course must be made available at the time to those making team declarations.

Race numbers: In order to manage runners and to ensure maps are issued to the correct runners it is generally necessary for all runners to be issued with numbered bibs that not only indicate the team, but also the lap number.

Start times: Classes running the same combination of courses should start at the same time. This adds to the competitive element of the competition by maximizing the head to head competition. Younger juniors should be able to compete safely without the possibility of being “mown down” by large mass starts and their start time(s) may need to be timed carefully, especially in assembly areas with more restricted access.

Map issue: The organiser must have a suitable method of issuing the correct map to the correct competitor in such a way that competitors cannot look at their maps before they start. Maps may be in opaque bags or folded and held together with labels. The exact method used will depend on the size of the event, whether maps are on waterproof paper or in plastic bags. Whatever method is used, it must be possible for the allocation of course to competitor number to be confirmed before the map is sealed (by controller or delegate) and for the competitor to be able to open their map easily and preferably without damaging the map as they start. Any labels or tape that is used to seal maps should not be stronger than the map itself.

Mini mass starts: Runners who have been waiting for a significantly long time for their previous team member should be started in mini-mass starts. The organiser must have an adequate method of recording which runners started when. In general, runners and teams should not be disqualified for starting in a mini mass start, consequently the results system must be able to calculate overall running time for all teams.

Map collection: It is important that teams are not able to gain unfair advantage by comparison of race maps before the competition is concluded. Therefore it is usual to retain all maps in the finish area until all competitors have started. The organiser should be able to manage the collection and issue of maps, usually on a club basis.

5. Further advice

Additional advice on relay planning and changeover design can be found the booklet Course Planning by Graham Nilsen which is available from the British Orienteering National Office or to download from the British Orienteering website.

If you cannot find the answer to a question within the published Rules, Appendices and Guidelines then please contact your Association's representative on Rules Group, or failing that the Chairman of Rules Group via the British Orienteering National Office.